APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/849,377	05/04/2001	Alan Roeder Elderon	SVL920010038US1	1988

24852	7590	06/29/2004

INTERNATIONAL BUSINESS MACHINES CORP
IP LAW
555 BAILEY AVENUE , J46/G4
SAN JOSE, CA 95141

EXAMINER
CAO, DIEM K

ART UNIT	PAPER NUMBER
2126	

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _04 May 2001_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-25_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-25_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _2-12-2002_.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-25 are presented for examination.

2.   The cross references related to the application cited in the specification must be updated

(i.e. the relevant status, with PTO serial numbers or patent numbers where appropriate, on pages

1-2).

Double Patenting

3.   The nonstatutory double patenting rejection is based on a judicially created doctrine
grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or
improper timewise extension of the "right to exclude" granted by a patent and to prevent possible
harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed.
Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686
F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA
1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).
        A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to
overcome an actual or provisional rejection based on a nonstatutory double patenting ground
provided the conflicting application or patent is shown to be commonly owned with this
application. See 37 CFR 1.130(b).
        Effective January 1, 1994, a registered attorney or agent of record may sign a terminal
disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37
CFR 3.73(b).

4.   Claims 1-4, 6-8, and 11-13 are provisionally rejected under the judicially created doctrine

of obviousness-type double patenting as being unpatentable over claims 1-10 of copending

Application No. 09/849,105. Although the conflicting claims are not identical, they are not

patentably distinct from each other because the only different between the instant application and

the copending application is the instant application claims "a language running on the application

server" and the copending application claims "the transaction message formatter running on the

application server" and "the metamodel data of the target transaction message formatter

including a message descriptor, logical page, password, segment, message field, device

descriptor, device type, device division, device page and device field". It would have been

obvious to one of ordinary skill in the art all the steps of the invention are the same in both

applications, and the instant application also support transaction between client and server

applications.

This is a provisional obviousness-type double patenting rejection because the conflicting

claims have not in fact been patented.

5.   Claims 1-25 are provisionally rejected under the judicially created doctrine of

obviousness-type double patenting as being unpatentable over claims 1-4, 11, 14-17, 24, 26-29,

37, 39-42 and 47 of copending Application No. 09/849,190. Although the conflicting claims are

not identical, they are not patentably distinct from each other because the only different between

the instant application and the copending application is the instant application claims "a language

running on the application server" and the copending application claims "the high level

assembler running on the application server". It would have been obvious to one of ordinary skill

in the art, the language application and the high level assembler application are both legacy

applications, and all the steps are identical in two applications.

This is a provisional obviousness-type double patenting rejection because the conflicting

claims have not in fact been patented.

6.   Claims 1-25 are provisionally rejected under the judicially created doctrine of

obviousness-type double patenting as being unpatentable over claims 1-4, 11, 14-17, 24, 26-29,

37, 39-44 and 49 of copending Application No. 09/849,563. Although the conflicting claims are

not identical, they are not patentably distinct from each other because the only different between

the instant application and the copending application is the instant application claims "<u>a language</u>

running on the application server" and the copending application claims "<u>a PL/I language</u>

running on the application server". It would have been obvious to one of ordinary skill in the art

language is a programming language, and all the steps in the two applications are identical,

therefore, one could apply PL/I language to the system of instant application.

This is a <u>provisional</u> obviousness-type double patenting rejection because the conflicting

claims have not in fact been patented.

7.   Claims 1-25 are provisionally rejected under the judicially created doctrine of

obviousness-type double patenting as being unpatentable over claims 1-4, 11, 14-17, 24, 26-29,

37, 39-44 and 49 of copending Application No. 09/849,813. Although the conflicting claims are

not identical, they are not patentably distinct from each other because the only different between

the instant application and the copending application is the instant application claims "<u>a language</u>

running on the application server" and the copending application claims "<u>COBOL</u> running on the

application server". It would have been obvious to one of ordinary skill in the art language is a

programming language, and all the steps in the two applications are identical, therefore, one

could apply COBOL language to the system of instant application.

This is a <u>provisional</u> obviousness-type double patenting rejection because the conflicting

claims have not in fact been patented.

8.   Claims 1-4, 6-8, 11-13, 16-18, 19, and 22 are provisionally rejected under the judicially

created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11 of

copending Application No. 09/849,816. Although the conflicting claims are not identical, they

are not patentably distinct from each other because the only different between the instant

application and the copending application is the instant application claims "a language running

on the application server" and the copending application claims "the transaction manager

running on the application server". It would have been obvious to one of ordinary skill in the art

all the steps of the invention are the same in both applications, wherein language and the

transaction manager are different type of legacy applications provide functionality to the front

end.

         This is a provisional obviousness-type double patenting rejection because the conflicting

claims have not in fact been patented.

9.   Claims 1-2, 4-6, 11, and 16 are provisionally rejected under the judicially created

doctrine of obviousness-type double patenting as being unpatentable over claims 1-2, 3, and 9-10

of copending Application No. 10/310,343. Although the conflicting claims are not identical,

they are not patentably distinct from each other because the only different between the instant

application and the copending application is the instant application claims "a language running

on the application server" and the copending application claims "a first target language running

on the application server" and "said Type Descriptor class connector metamodels comprising of

an Instance Type Descriptor Base class, a Type Descriptor Language Element class, and a

Language Element Model inheriting from Type Description Language element class". It would

have been obvious to one of ordinary skill in the art language could be any programming language, and it could be replaced by another language because all the steps are identical in both applications and both share the same purpose.

This is a <u>provisional</u> obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 101

10.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

11.   Claims 19-25 are rejected under 35 U.S.C. 101 because the disclosed invention is inoperative and therefore lacks utility. Claim 19 claims a product only without any function and use and the purpose of the product.

Claim Objections

12.   Claims 1, 3, 8, 11, and 13 are objected to because of the following informalities:

Claim 1 cites "theresponse" in step d should be "the response".

Claims 3, 8 and 13 cite "an connector" should be "a connector".

Claim 16 cites "theapplication" in line 9 should be "the application".

Appropriate corrections are required.

Claim Rejections - 35 USC § 112

13.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

14.   Claims 6-10, and 11-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 cites "to convert a response" in step (d) should be "to convert the response" because it refers to "a response" in step (d), and "wherein connector" in step (e) should be "wherein the connector" because it refers to "the connector" in steps (b), (c) and (d). Claim 6 further cites "a language running on the server" on line 28 and "in a second language with a second application program residing on the server", if both refer to one language, then claim 6 should cite "a second language running on the server" and "in the second language with a second application program residing on the server", respectively.

Claim 11 cites "the connector ... to receive the application request from the server" in step (c) should be "the connector ... to receive the response to the application request from the server", and "to convert a response" in step (c) should be "to convert the response".

Appropriate corrections are required.

Claim Rejections - 35 USC § 103

15.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

16.   Claims 1-4, 6-9, 11-14, and 16-17 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Devine et al (U.S. 2003/0191970 A1) in view of Yee et al (U.S. 6,738,975

B1).

17.   **As to claim 1**, Devine teaches

-     initiating the application request on the end user application in a first language with a first

      application program (The customer workstation ... and front-end services; page 4, section

      0058 and client-tier software ... Java classes; page 4, left column, lines 1-5 and client

      message, the request; page 5, section 0068 and request from an application running on the

      customer's workstation; page 6, section 0074),

-     transmitting the application request to the server (the messages created ... Web Servers

      24; page 7, section 0095 and The DMZ ... the user section; page 5, section 0068) and

      converting the application request from the first language of the first end user application

      to the legacy language application running on the application server (a translation process

      for translating a message into an underlying message; page 8, section 0099),

-     processing the application request on the application server (other legacy or host platform

      ... at the client browser; page 5, section 0073),

- transmitting a response to the application request from the application server to the end user application, and converting the response from the legacy language to the first language of the first end user application (Data returned ... to client format ... response to the request; page 8, section 0099 and Any data returned from the application server is translated back to client format and returned over the Internet to the client workstation; page 6, section 0074), and

- wherein the end user application and the application server have at least one connector therebetween (legacy adapter; page 3, section 0054 and Fig. 1 and proxy; page 8, section 0099), and the steps of (i) converting the application request from the first language of the first end user application as a source language to the legacy language running on the application server as a target language (a translation process for translating a message into an underlying message; page 8, section 0099), and (ii) converting a response to the application request from the legacy language running on the application server as a source language to the first language of the first end user application as a target language (Any data returned from the application server is translated back to client format; page 6, section 0074) using the metamodels of respective source and target language (metadata; page 6, section 0081 and proxy specific data ... providing a service; page 8, section 0097), and converting the source language to the target language (a translation process for translating a message into an underlying message; page 8, section 0099 and Any data returned from the application server is translated back to client format; page 6, section 0074).

18.   However, Devine does not teach populating the connector metamodels with metamodel

data of each of the respective source and target languages. Yee teaches populating the connector

metamodels with metamodel data of each of the respective source and target languages (The user

identifies ... actual output message; col. 21, lines 1-11 and A transformer implements ... to the

target objects; col. 21, lines 43-55).

19.   It would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine the teaching of Devine and Yee because Yee provides a fast and simple

integration of applications, legacy applications while reduce or substantially eliminate the need

for the expensive custom coding that is traditionally required to integrate applications.

20.   **As to claim 2**, Devine teaches the end user application is a web browser (The customer

workstation ... browser based user interface; page 3, section 0056).

21.   **As to claim 3**, Devine teaches the end user application is connected to the application

server through a web server, and the web server comprises a connector (customer workstation,

web server, application server, adapter programs; page 3, sections 0053-0055 and Fig. 1).

22.   **As to claim 4**, Devine does not teach the metamodel metadata comprises invocation

metamodel metadata, application domain interface metamodel metadata, and type descriptor

metamodel metadata. However, Devine teaches metadata is used (page 6, section 0081). Yee

teaches connector (agent adapter) mediate differences interface protocols and data structures

between applications to provide a uniform, normalized view of business event (col. 16, lines 62-65), message definition object identifies data of an enterprise application, and well-defined message format to describe the layout of the native data (col. 17, lines 49-54 and 48-61 and col. 19, lines 25-44), and mapping definition objects define how the system will transform system messages extract from one or more applications to messages needed by other applications (col. 17, lines 55-58 and col. 20, lines 53-59). Although Yee does not use the same terms as defined in the instant application, the metadata in the system of Yee covers the same as in the system of the application. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Devine and Yee because it will improve the system of Devine because the system of Yee provides an efficient and cost effective information sharing.

23.   **As to claims 6 and 11**, they correspond to the method of claim 1 except they are transaction processing system claims.

24.   **As to claims 7-9**, see rejections of claims 2-4 above.

25.   **As to claims 12-14**, see rejections of claims 2-4 above.

26.   **As to claim 16**, see rejection of claim 1 above. However, Devine does not teach the end user applications each comprising an e-mail client, a content database client, and a content replication client, and the system also including an email server, a content database server, and a

content replication server. Devine teaches the there are multiple applications at the client workstation, the applications responsible for presentation and front-end services. It provides a user interface to various services and communications within the system (page 4, section 0058). Devine further teaches the backend having applications directed to legacy services, database storage and retrieval system, etc (page 3, sections 050 and 0055). It would have been obvious to one of ordinary skill in the art at the time the invention was made the system of Device could include email client and server, content database client and server and content replication client and server because it supports multiple services in the system.

27.   **As to claim 17**, see rejection of claim 4 above.

28.   Claims 5, 10, 15, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Devine et al (U.S. 2003/0191970 A1) in view of Yee et al (U.S. 6,738,975 B1) further in view of Mellen-Garnett et al (U.S. 6,094,688).

29.   **As to claim 5**, Devine does not teach the type descriptor metamodel metadata defines physical realizations, storage mapping, data types, data structures, and relaxation constraints. Mellen-Garnett teaches the type descriptor metamodel metadata defines physical realizations, storage mapping, data types, data structures, and realization constraints (Data transformation service ... syntactic and semantic transformation of data; col. 7, lines 23-45 and a connector includes an API manipulator ... message transformer; col. 19, lines 6-14). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the

teaching of Devine and Mellen-Garnett because it provides a method for sharing information between applications written in different languages in the computing system.

30.   **As to claims 10, 15 and 18**, see rejection of claim 5 above.

31.   Claims 19-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yee et al (U.S. 6,738,975 B1) in view of Mellen-Garnett et al (U.S. 6,094,688).

32.   **As to claim 19**, Yee teaches connector (agent adapter) mediate differences interface protocols and data structures between applications to provide a uniform, normalized view of business event (col. 16, lines 62-65), message definition object identifies data of an enterprise application, and well-defined message format to describe the layout of the native data (col. 17, lines 49-54 and 48-61 and col. 19, lines 25-44), and mapping definition objects define how the system will transform system messages extract from one or more applications to messages needed by other applications (col. 17, lines 55-58 and col. 20, lines 53-59). Although Yee does not use the same terms as defined in the instant application, the metadata in the system of Yee covers the same as in the system of the application. Yee further teaches a metamodel metadata repository of source and target language metamodel metadata (The repository service 135 ... metadata; col. 15, lines 55-58).

33.   However, Yee does not explicitly teach invocation metamodel metadata. Mellen-Garnett teaches invocation metamodel metadata (API manipulator; col. 19, lines 6-10).

34.   It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Yee and Mellen-Garnett because it improves the method for sharing information between applications written in different languages in the computing system.

35.   **As to claim 20**, Yee teaches building connector stubs from the metamodel metadata (create agent-adapter; col. 26, lines 47-62 and generate customized intelligent agent-adapter; col. 15, lines 41-54).

36.   **As to claim 21**, Yee teaches retrieving connector metamodel metadata of respective source and target languages from the metamodel metadata repository (The repository service ... metadata; col. 15, lines 55-58), populating the connector metamodels with metamodel data of each of the respective source and target language from the repository (the user crate ... as output; col. 21, lines 1-11), invoking the retrieved, populated connector metamodels (When the transformer ... input messages; col. 21, lines 49-55), and converting the source language to the target language (transforms the input data; col. 21, lines 49-55 and col. 21, line 65 – col. 22, line 6).

37.   **As to claim 22**, Yee teaches connector (agent adapter) mediate differences interface protocols and data structures between applications to provide a uniform, normalized view of business event (col. 16, lines 62-65), message definition object identifies data of an enterprise

application, and well-defined message format to describe the layout of the native data (col. 17, lines 49-54 and 48-61 and col. 19, lines 25-44), and mapping definition objects define how the system will transform system messages extract from one or more applications to messages needed by other applications (col. 17, lines 55-58 and col. 20, lines 53-59). Although Yee does not use the same terms as defined in the instant application, the metadata in the system of Yee covers the same as in the system of the application.

38.   **As to claim 23**, Yee does not teach the invocation metamodel metadata is chosen from the group consisting of message control information, security data, transactional semantics, trace and debug information, pre-condition and post-condition resources, and user data. Mellen-Garnett teaches message control information (registry service, event service, messaging service; col. 6, lines 10-15), security data (rule engine service; col. 6, lines 10-15), transactional semantic (Transaction service 248; col. 7, lines 46-62), trace and debug information (Error and exception service 260; col. 10, lines 23-40), pre-condition and post-condition resources (transaction system resource; col. 9, lines 57-67 and transaction is interrupt; col. 10, lines 28-40), and user data (name service, subscription service and publication service; col. 6, lines 10-15). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Yee and Mellen-Garnett because it will improve the performance of Yee's system because transaction service provides consistency across applications in the system.

39.   **As to claim 24**, Yee does not teach explicitly teach the application domain interface metamodel metadata comprises input parameter signatures, output parameter signatures, output

parameter signatures, and return type. Yee teaches connector (agent adapter) mediates

differences interface protocols and data structures between applications (col. 16, lines 62-65),

and user can create a transformation to transform input data from the source application to the

input format that expected by the target application (col. 21, lines 12-24). It would have been

obvious to one of ordinary skill in the art at the time the invention was made the system of Yee

provides the same functionality of the claimed invention even though the same terms are not

used.

40.   **As to claim 25**, Yee teaches message control information (when the user define a

message definition ... considered valid within the system; col. 19, lines 40-44), security data

(passwords and user Ids; col. 20, lines 38-40), and user data (passwords and user Ids; col. 20,

lines 38-40). However, Yee does not teach the invocation metamodel metadata is chosen from

the group consisting of transactional semantics, trace and debug information, pre-condition and

post-condition resources. Mellen-Garnett teaches transactional semantic (Transaction service

248; col. 7, lines 46-62), trace and debug information (Error and exception service 260; col. 10,

lines 23-40), pre-condition and post-condition resources (transaction system resource; col. 9,

lines 57-67 and transaction is interrupt; col. 10, lines 28-40). It would have been obvious to one

of ordinary skill in the art at the time the invention was made to combine the teaching of Yee and

Mellen-Garnett because it will improve the performance of Yee's system because transaction

service provides consistency across applications in the system.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Diem K Cao whose telephone number is (703) 305-5220. The examiner can normally be reached on Monday - Thursday, 9:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703) 305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to:
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Diem Cao

MENG-AL T. AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100